

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P589781

Luminaire Tested: **FMR-24-2-LD4-4STD-40-UNV-80-84-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589781  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/8/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FMR-24-2-LD4-4STD-40-UNV-80-84-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

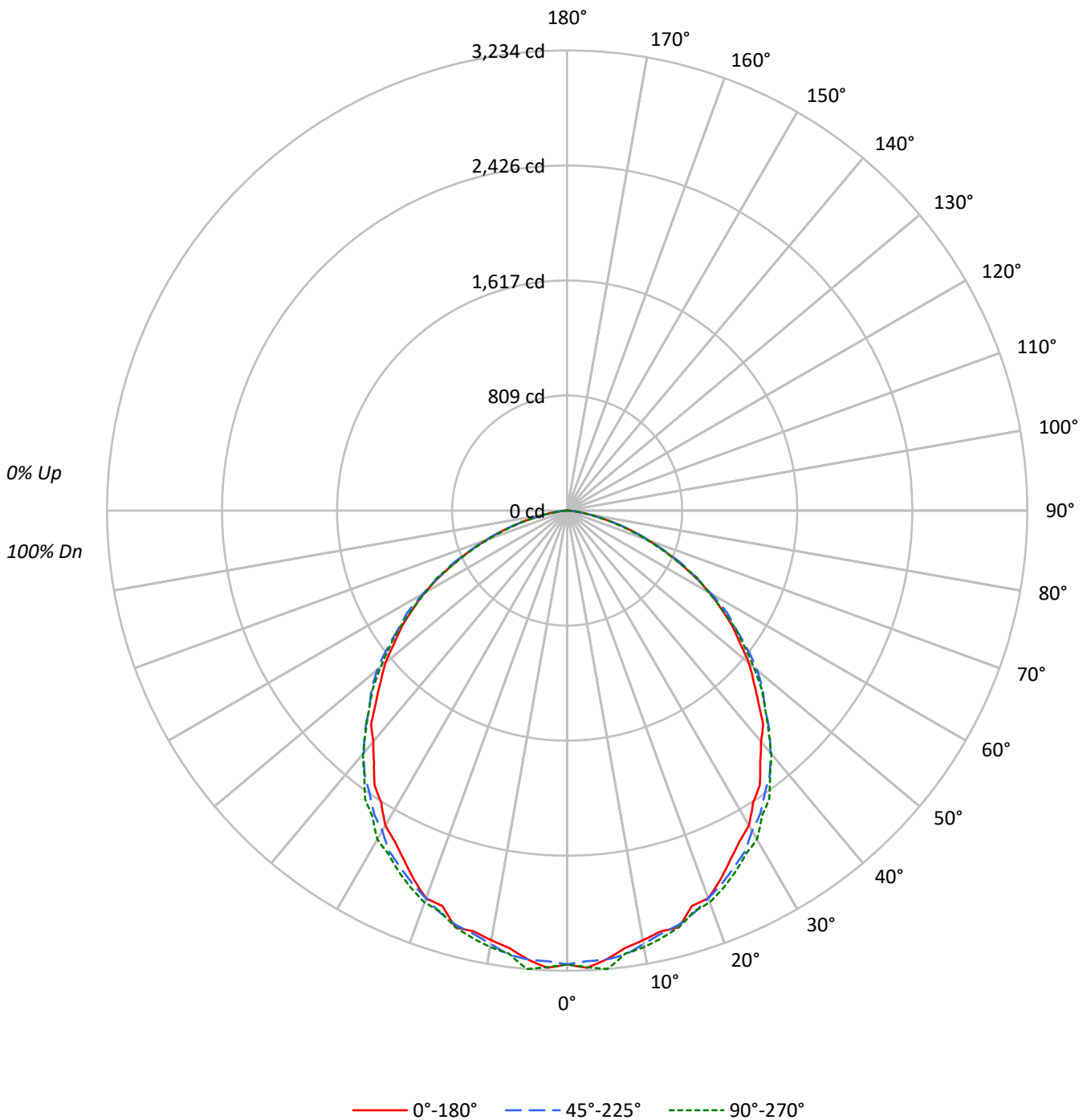
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8037.0 lumens  
Efficiency: N/A  
Efficacy: 120.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 66.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	8581	8581	8581
5°	8553	8556	8736
10°	8379	8453	8512
15°	8446	8400	8447
20°	8303	8303	8391
25°	8048	8224	8314
30°	7937	8077	8291
35°	7750	7953	8132
40°	7449	7807	7842
45°	7223	7480	7491
50°	6986	7302	7162
55°	6656	6786	6738
60°	6225	6287	6174
65°	5550	5692	5511
70°	4762	4778	4645
75°	3771	3763	3617
80°	2526	2456	2360
85°	1374	1362	1272



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	300.0	3.7
10°-20°	850.1	10.6
20°-30°	1273.7	15.8
30°-40°	1509.6	18.8
40°-50°	1512.3	18.8
50°-60°	1283.7	16.0
60°-70°	865.5	10.8
70°-80°	380.3	4.7
80°-90°	61.8	0.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2423.8	30.2
0°-40°	3933.3	48.9
0°-60°	6729.4	83.7
0°-90°	8037.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8037.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3189	3189	3189	3189	3189	
5°	3166	3159	3168	3158	3234	298
15°	3032	2997	3015	3031	3032	845
25°	2710	2725	2770	2806	2800	1253
35°	2359	2366	2421	2477	2475	1465
45°	1898	1934	1966	2016	1968	1468
55°	1419	1409	1446	1436	1436	1262
65°	872	860	894	860	866	867
75°	363	355	362	336	348	389
85°	44	43	44	43	41	64
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3188.9	3188.9	3188.9	3188.9	3188.9
2.5°	3216.5	3192.2	3169.5	3195.9	3211.9
5°	3166.2	3158.8	3167.5	3158.0	3234.2
7.5°	3101.2	3129.6	3146.1	3135.8	3140.3
10°	3066.6	3056.7	3093.4	3118.9	3115.2
12.5°	3029.5	3044.4	3046.4	3074.0	3076.5
15°	3031.6	2996.6	3015.1	3030.8	3032.0
17.5°	2913.8	2951.7	2964.5	3000.3	2955.8
20°	2899.4	2871.8	2899.4	2936.1	2930.3
22.5°	2810.9	2780.0	2839.3	2871.8	2869.8
25°	2710.4	2725.3	2769.7	2806.0	2800.2
27.5°	2622.3	2639.6	2703.0	2752.9	2720.7
30°	2554.4	2545.8	2599.3	2643.7	2668.4
32.5°	2432.9	2464.2	2526.8	2570.9	2547.4
35°	2359.2	2366.2	2421.0	2477.0	2475.3
37.5°	2230.4	2262.9	2339.9	2355.5	2341.1
40°	2120.4	2153.0	2222.5	2239.4	2232.4
42.5°	2039.3	2045.1	2104.8	2124.1	2093.3
45°	1898.1	1933.5	1965.6	2016.3	1968.5
47.5°	1777.9	1794.3	1863.5	1877.1	1852.0
50°	1668.8	1674.5	1744.1	1727.2	1710.8
52.5°	1531.6	1555.9	1595.1	1591.8	1572.4
55°	1418.8	1409.4	1446.4	1436.5	1436.1
57.5°	1283.4	1299.8	1330.3	1314.7	1289.6
60°	1156.6	1157.0	1168.1	1150.4	1147.1
62.5°	1015.3	1020.3	1022.7	1000.9	1036.3
65°	871.6	860.1	893.9	859.7	865.5
67.5°	739.5	745.2	741.9	720.5	728.8
70°	605.2	612.7	607.3	583.0	590.4
72.5°	482.6	473.5	479.3	448.8	462.8
75°	362.7	355.3	361.9	336.4	347.9
77.5°	247.0	252.8	248.7	235.1	242.9
80°	163.0	158.5	158.5	150.7	152.3
82.5°	95.1	90.6	89.3	86.9	90.6
85°	44.5	43.2	44.1	42.8	41.2
87.5°	16.1	16.5	16.5	15.6	14.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)